Fish Advisory Information

Superfund Update

Cornell-Dubilier Site
(Hamilton Industrial Park)

South Plainfield, New Jersey

EPA Region 2 August 1997

UPDATE

Investigations conducted by the U. S. Environmental Protection Agency (EPA) have identified the contaminants including Polychlorinated Biphenyls (PCBs) and heavy metals at the Cornell-Dubilier site and in the Bound Brook downstream of the site. EPA has initiated a study to determine the impacts of contamination in the Bound Brook on human health and the environment.

Water, sediment and fish samples were collected from the Bound Brook at one location adjacent to the site, three locations between the site and New Market Pond, and two locations in New Market Pond. Samples were also collected from one location upstream of the site.

Fish collected from the Bound Brook as part of this study were found to contain PCBs at higher than the amount allowed by the Food and Drug Administration. This information has been provided to the New Jersey Department of Environmental Protection (NJDEP). NJDEP will issue a Fish Advisory and post signs warning people not to eat fish taken from these waters. The signs will include telephone numbers to call for additional information.

The results of analysis of water and sediment samples are expected in September.

BACKGROUND

The Cornell-Dubilier site occupies about 25 acres at 333 Hamilton Boulevard in South Plainfield. It is bordered by Hamilton Boulevard to the northwest, Spicer Avenue to the southwest, a wetlands area to the southeast, the Bound Brook and Conrail tracks to the northeast.

Cornell-Dubilier operated at the Site from 1936 to 1962 manufacturing electronic components, including capacitors. It is alleged that during its operation, Cornell-Dubilier disposed of PCB-contaminated materials and other hazardous substances at the site.

The Site is currently known as the Hamilton Industrial Park and is occupied by 15 businesses.

CLEANUP ACTIONS

Under the federal Superfund law, EPA can respond, reduce or eliminate the threats to public health by conducting their owncleanup or requiring potentially responsible parties (PRPs) to conduct a cleanup.

EPA has issued a Order to the property owner to conduct the following cleanup actions:

- limit access to areas of known PCB contamination;
- take necessary actions to limit the movement of contaminants to the nearby Bound Brook through surface water run-off; and
- pave driveways and parking areas within the industrial park.

This work has started and is expected to be completed in September.

FUTURE ACTIONS

EPA has expanded the study area for the evaluation of threats to human health to include the portions of the Bound Brook between New Market Pond and the Raritan River.

EPA has collected soil samples from residential properties bordering the site. No immediate action is required based on the results of the limited sampling conducted. Additional sampling will be performed to confirm these results. EPA is in the process of providing these sampling results to the residents of the property sampled.

HEALTH INFORMATION

For information about the health effects from exposure to PCBs or other environmental contaminants, contact your local health department or the Agency for Toxic Substances and Disease Registry at (908) 906-6931.

PUBLIC INVOLVEMENT

EPA encourages public participation during all phases of cleanup activities. If you have questions, or would like additional information about the site, please contact the following EPA personnel:

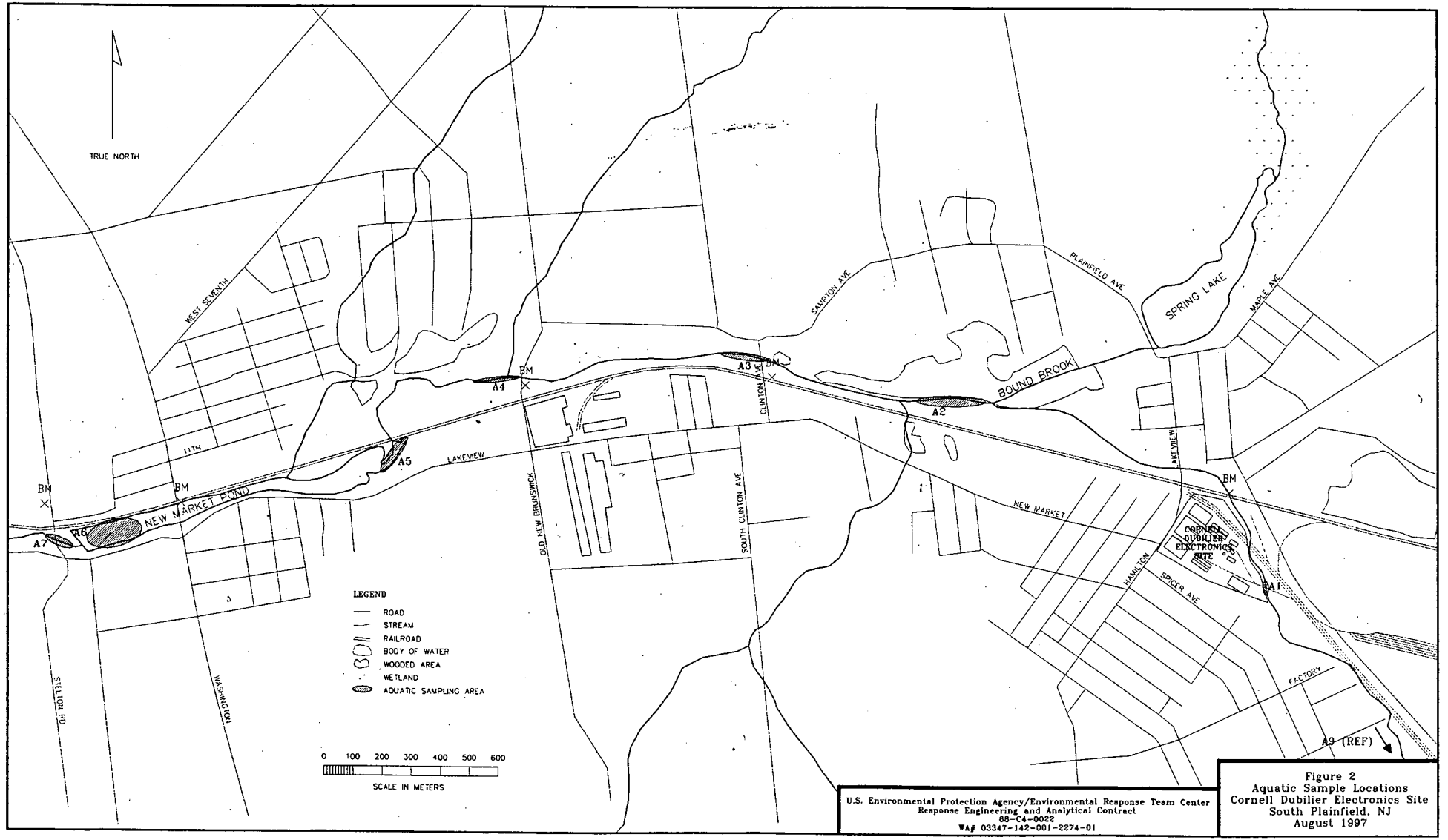
Pat Seppi
Community Involvement Coordinator
U.S. EPA, Communications Division
290 Broadway, Floor 26
New York, New York 10007
(212) 637-3679

Eric Wilson
On-Scene Coordinator
2890 Woodbridge Avenue
Edison, New Jersey 08837
(908) 906-6991

SUPERFUND OMBUDSMAN

EPA, Region 2, has designated an ombudsman as a point-of-contact for community concerns and questions about the federal Superfund program in New Jersey, New York, Puerto Rico and the U.S. Virgin Islands. To support this effort, the agency has established a 24-hour, toll-free number that the public can call to request information, express their concerns or register complaints about Superfund. The ombudsman for EPA's Region 2 office is:

George H. Zachos
U.S. EPA, Region 2
2890 Woodbridge Avenue MS-211
(908) 321-6621
Toll-free 888-283-7626



U.S. Environmental Protection Agency/Environmental Response Team Center
Response Engineering and Analytical Contract
68-C4-0022
WA# 03347-142-001-2274-01

Figure 2
Aquatic Sample Locations
Cornell Dubilier Electronics Site
South Plainfield, NJ
August 1997

Certain fish in the Bound Brook, New Market Pond, and the streams that feed into them may be unsafe to eat. These include:

- *largemouth bass*
- *pumpkin seed*
- *carp*
- *white sucker*

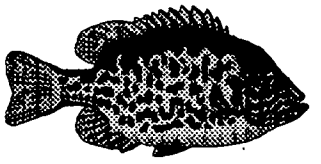
These fish are unsafe and should not be eaten.

Fish in these streams and ponds are contaminated with PCBs. Consumption of these fish may be harmful to your health. PCBs are classified as probable cancer causing substances in humans.

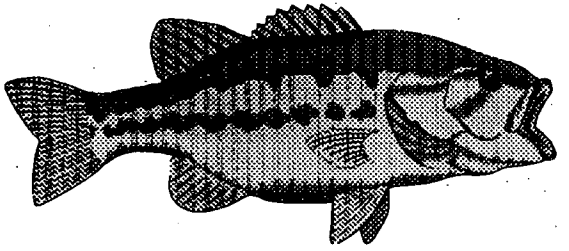
The amount of PCBs in fish from these waters is higher than the amount allowed by the U.S Food and Drug Administration. No one should eat these fish. **You are at highest risk from eating fish contaminated with PCBs if you are:**

- *pregnant*
- *a nursing mother*
- *a woman of child-bearing age*
- *a child under the age of 15 years.*

For information on the health effects of PCBs call:
ATSDR Regional Representatives, Arthur Block or Brian von Gunten at (908) 906-6931

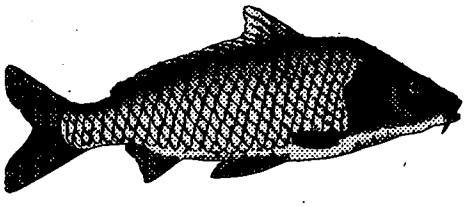


ATSDR Fish Consumption Advisory



Bound Brook

New Market Pond



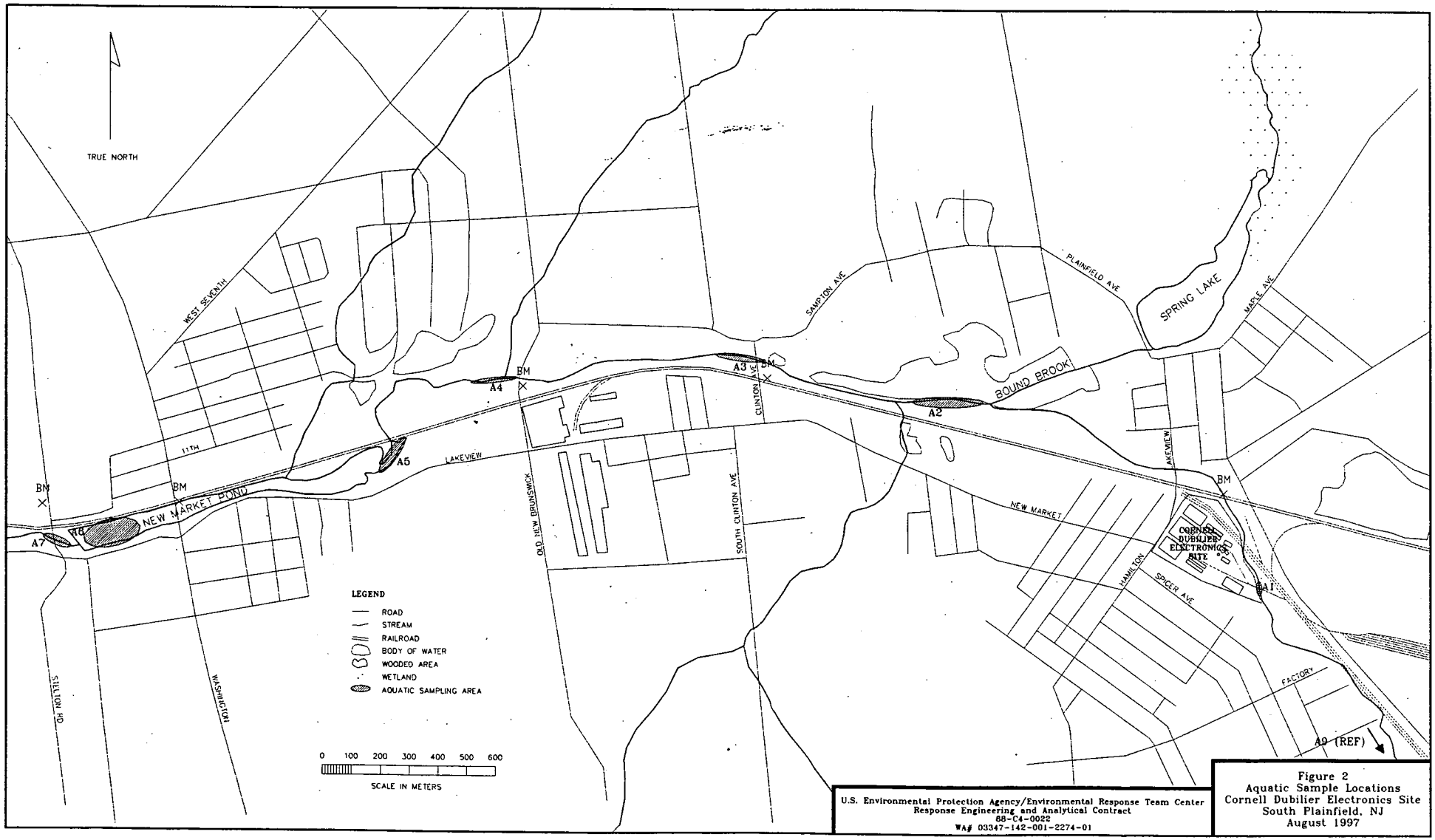
Middlesex County

August 1997

PCB CONTAMINATION IN EDIBLE FISH FILLET SAMPLES COLLECTED FROM THE BOUND BROOK & NEW MARKET POND	
Species	**Concentration Range (ppm)**
White Sucker	0.298 to 15.5
Carp	0.226 to 36.0
Sunfish	0.420 to 7.0
Largemouth Bass	0.840 to 2.32

SUMMARY OF EDIBLE FISH SAMPLES COLLECTED FROM BOUND BROOK JUNE 1997

Area	Description	Species	Sample No.	PCB Conc. (ppm)
A1	Bound Brook Adjacent to the Site	Carp	A1-CC-1	7.50W
		Carp	A1-CC-2	8.50W
		Carp	A1-CC-3	9.80W
		Pumpkin Seed	A1-PS-1	0.72W
		Pumpkin Seed	A1-PS-2	6.50W
		Pumpkin Seed	A1-PS-3	0.61W
		White Sucker	A1-WS-1	5.20W
		White Sucker	A1-WS-2	1.14W
		White Sucker	A1-WS-3	6.56W
A2	Bound Brook in Spring Lake County Park	Pumpkin Seed	A2-PS-1	4.00W
		Pumpkin Seed	A2-PS-2	7.00W
		White Sucker	A2-WS-1	8.00W
		White Sucker	A2-WS-2	4.50W
		White Sucker	A2-WS-3	12.20W
A3	Bound Brook at Clinton Avenue	Pumpkin Seed	A3-PS-1	2.32W
		Pumpkin Seed	A3-PS-2	2.09W
		Pumpkin Seed	A3-PS-3	3.40W
		White Sucker	A3-WS-1	11.00W
		White Sucker	A3-WS-2	8.20W
		White Sucker	A3-WS-3	8.40W
A4	Bound Brook at New Brunswick Avenue	Pumpkin Seed	A4-PS-1	0.42W
		Pumpkin Seed	A4-PS-2	2.50W
		Pumpkin Seed	A4-PS-3	3.60W



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August 1997

HEALTH CONSULTATION

CORNELL DUBILIER ELECTRONICS INCORPORATED

SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

CERCLIS NO. NJD981557879

Prepared by:

Exposure Investigation and Consultation Branch
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry

Background and Statement of Issues

The Region II U.S. Environmental Protection Agency (EPA) has requested that the Agency for Toxic Substances and Disease Registry (ATSDR) review analytical data of fish samples collected from surface water near the Cornell-Dubilier Electronics (CDE) site and determine if polychlorinated biphenyls (PCBs) are present in fish at levels of public health concern.

The CDE site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey [1]. The 25 acre site is located in an industrial/commercial/residential area and is bordered by commercial businesses and residences on the south, west, and north, and on the southeast, east, and northeast by an unnamed tributary to Bound Brook [1].

During the 1950s, Cornell-Dubilier Electronics, Inc. manufactured electronic parts and components, and tested transformer oils. Discarded electronic components were landfilled onsite and transformer oils contaminated with PCBs were reportedly dumped directly onto site soils [1]. The company vacated the site in the early 1960s.

The site is currently known as the Hamilton Industrial Park and is occupied by an estimated 15 commercial businesses. Numerous companies have operated at the site as tenants over the years [1].

An unnamed creek that borders the site to the southeast, east, and northeast flows into Bound Brook. The confluence of the unnamed creek and Bound Brook is approximately 800 meters downstream of the site. Bound Brook then flows west for approximately 3,000 meters and enters New Market Pond. Available information indicates that fish are being caught and eaten from Bound Brook and New Market Pond [2].

The EPA has conducted sampling events at the site. In mid-1996, several surface soil samples (0 - 3 inches and 0 - 6 inches) were collected from a 1.5 acre fenced area at the site and analyzed for PCBs; PCBs were detected at a maximum concentration of 51,000 parts-per-million [3].

In mid-1996, the EPA collected surface soil samples (0 - 3 inches) from 23 locations at the site [1]. Samples were analyzed for PCBs; PCBs were detected at concentrations ranging from 3.6 to 3,000 ppm [1].

A fish sampling event was conducted in surface waters adjacent to and near the CDE site. Fish were collected from the following locations:

Three areas of Bound Brook located downstream from the CDE site

Two areas of New Market Pond

The unnamed creek at a location immediately adjacent to the CDE site

The unnamed creek at a reference location 1,000 meters upgradient of the CDE site [4].

Fish filets were analyzed for PCBs. PCBs were detected at maximum concentrations indicated in Table 1 [4].

Table 1. Maximum Concentrations of PCBs Detected in Fish Filets

Location	Concentration (ppm)
Bound Brook	12.2
New Market Pond	36.0
Adjacent, CDE	9.8
Reference Location	7.8

Note: Fish ranged in total length from 4.1 to 25.6 inches (average = 10.9 inches). Fish ranged in total weight from 0.8 to 35.4 ounces (average = 9.7 ounces)

Discussion

PCBs are persistent in the environment and break down slowly. In water, PCBs partition significantly from water to aquatic organisms, such as fish [5]. The bioconcentration factors (BCF) of various PCBs in aquatic animals vary from 26,000 to 660,000; BCF is defined as the ratio of the concentration of a contaminant in aquatic organisms to the concentration of the contaminant in the surrounding water. Evidence also indicates that PCBs biomagnify within the food chain [5].

In humans, long-term exposure to PCBs can affect the skin and liver; reproductive, endocrine, immunosuppressive, and carcinogenic effects have been observed in animal studies [5,6] PCBs have very low potential for producing acute toxic effects [6].

Consumption of fish that contain elevated levels of PCBs can result in exposures at levels of public health concern. The Food

and Drug Administration (FDA) has set tolerances for PCBs in the edible portions of fish at 2 ppm [7]. Tolerances are established at levels that are sufficient for the protection of public health [8]. The tolerance level of 2 ppm PCBs was exceeded in at least one sample of each of the species collected [4].

Conclusions

Based on the available data, ATSDR concludes that PCBs in fish collected in surface water near the Cornell-Dubilier Electronics Site in South Plainfield, New Jersey exceed FDA tolerance levels for PCBs in fish and are at levels of public health concern.

Recommendations

Fish that contain greater than 2 ppm PCBs in the edible portion of the fish should not be eaten.

If further clarification is required or if additional information becomes available, please do not hesitate to contact this office at 404/639-0616.

Steven Kinsler, Ph.D.
Senior Toxicologist

References

1. ATSDR Record of Activity, Cornell-Dubilier Electronics, Log # 97-1004, S. Kinsler, October 30, 1996.

2. Personal Communication, S. Kinsler, ATSDR; E. Wilson, EPA; July 31, 1997.

3. ATSDR Record of Activity, Cornell-Dubilier Electronics, Log # 96-4046, S. Kinsler, September 19, 1996.

4. Bound Brook Sampling and Edible Fish Tissue Data Report, Cornell-Dubilier Electronics Site, South Plainfield, New Jersey, Prepared By: Environmental Response Team Center, Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, July 1997.

5. Toxicological Profile for Polychlorinated Biphenyls, U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, April 1993.

6. ATSDR Case Studies in Environmental Medicine, Polychlorinated Biphenyl Toxicity, U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, June 1990.

7. Code of Federal Regulations, Title 21, Volume 2, Chapter 1, Part 109, Section 109.30--Tolerances for polychlorinated biphenyls (PCBs), April 1, 1996.

8. Code of Federal Regulations, Title 21, Volume 2, Chapter 1, Part 109, Section 109.4--Establishment of tolerances, regulatory limits, and action levels. April 1, 1996.